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ABSTRACT

Students' cognitive and affective development in achieving written communication objectives in the context of the world of work were compared with the same objectives placed in a liberal arts context. The research project involved four groups of students at Platte Technical Community College. Two experimental groups completed the cognitive objectives in the world of work context, whereas the two control groups completed the cognitive objectives in a liberal arts context. The students engaged in four projects within their respective settings. The posttest-only control group design was used to determine cognitive and affective differences. The data analysis showed that overall the experimental approach proved better in cognitive skill development and the control approach proved somewhat better in affective development. Performance objectives, evaluative criteria, and tabulated project data are appended. (VA)

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FINAL REPORT
VOCATIONAL EDUCATION RESEARCH PROJECT
Vocational Education Amendments of 1968
(Public Law 90-576)

A VOCATIONAL APPROACH TO WRITTEN COMMUNICATIONS

(VT-102-181)

Project Director
Dr. Ronald M. Hutkin

Project Co-directors
Mr. John R. Trindle
Dr. Roger L. Augspurger

PLATTE TECHNICAL COMMUNITY COLLEGE

July 1, 1974 - March 21, 1975

NEBRASKA STATE DEPARTMENT OF EDUCATION
DIVISION OF VOCATIONAL EDUCATION
and

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ACKNOWLEDGMENT

To design, implement, conduct, and complete a project of this type requires the talents and energies of many individuals. This study evolved from a series of experimental career related teaching units in Written Communications I which were developed by Mr. Jack Trindle during the 1972-73 school year. At that time he was Chairman of the Language and Literature Division at PTCC. During the 1973-74 school year Mr. Trindle and I worked closely with Mr. Elton Mendenhall, Director of the Nebraska Research Coordinating Unit for Vocational Education, in refining our collective ideas into a research proposal. Mr. Mendenhall's continual support, suggestions, and interest in this project provided much enthusiasm for the entire project team. When Dr. Roger Augspurger joined the PTCC staff in September 1974 as Chairman of the Creative and Social Cluster he became a project co-director. Dr. Augspurger worked closely and effectively with the project instructors and helped guide the project toward its objectives and completion.

At the heart of the project were four PTCC instructors: Mr. Chuck Potter, Mr. Jim Weber, Mrs. Ruth Anderson, and Mrs. Evelyn Bruegger. The instructors were responsible for developing the four projects and designing the project criteria rating sheets. The cooperation of the instructors and their willingness to share their experience, ideas, concerns, success, and frustrations resulted in a professional development activity for the entire project team.

Other individuals who were most helpful to the project team were Dr. Larry Andrews of UN-L, Mr. Chuck Pagel, and Mr. Gary Williams of PTCC. Dr. Andrews spent a day on campus doing a third party evaluation and was eager to share his experience from other projects with us as a means of gaining greater insights into the dynamics of this project. Mr. Pagel and Mr. Williams did a most able job of running the data on the computer.

The manuscript and final copy of the report was typed and duplicated by my secretary, Mrs. Wanda Williams. She is to be commended for an excellent job of typing the report and keeping the data well organized during the project.

R. M. H.

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PART I

ABSTRACT

Title of Project: A Vocational Approach to Written Communications.

Project Director: Dr. Ronald M. Hutkin, Associate Dean, Vocational Education.

Project Co-directors: Mr. John R. Trindle, Director, Community Services and Dr. Roger L. Augspurger, Chairman, Social and Creative Cluster.

Applicant Organization: Platte Technical Community College - A College of the Central Nebraska Technical Community College Area.

Statement of Problem: To evaluate student's cognitive and affective development in achieving written communication objectives placed in the context of the world of work. To evaluate these differences, two control groups and two experimental groups will be studied.

Major Objectives:

1. To establish if Platte Technical Community College students enrolled in written communication courses will achieve a higher level of proficiency in accomplishing the specific cognitive objectives when the objectives are placed in the context of the world of work or when the same cognitive objectives are placed in a liberal arts context.
2. To establish if Platte Technical Community College students enrolled in written communication courses will achieve greater self-perception at the end of a given semester after accomplishing affective written communication objectives placed in the context of the world of work or after accomplishing the same affective written communication objectives placed in a liberal arts context.

Procedures: In this research project, the post-test only control group design will be used to determine cognitive and affective differences. Full-time day students will be selected at random to establish the two experimental and two control groups. Randomization among the four groups will be accomplished through standard registration procedures.

The course under study is Eng 121 Written Communication I, which will appear in the 1974/75 catalog as follows:

Eng 121 Written Communication I 3 Cr Hrs

The student acquires a working knowledge of the decision-making process and applies his knowledge of the process to the structuring of written composition. The student will structure compositions which are compatible in mode and form to his special career, academic, or creative interests.

A - The decision-making process

B - General modes of decision making and general terms
of composition structure

C - Specialized modes of decision making and specialized
forms of composition structure.

Before the study begins, the content of the experimental and control groups will be analyzed for similarities and differences.

Contribution to Vocational Education: This research study is designed to deviate from the traditional curriculum pattern of isolating vocational content and liberal arts content. Experimental groups one and two will provide an integrated approach to dissolving fragmented course content into a system of instruction which employs not only community college resources, but also world of work resources, and community resources. The results of the experimental approach will

provide us with a new dimension in regard to curriculum planning in our vocational education programs. Because there will be considerable career activities in the project, the results should also have strong implications not only for other comprehensive two-year post-secondary institutions, but also for elementary and secondary schools.

Evaluation Procedures: Four major projects will be completed by each group. Objective-based criteria will be used for the evaluation of each project. Both experimental and control projects will be evaluated using the same criteria. For each of the four projects, the scores of the control and experimental groups will be combined, and a t-test will be run to test a hypothesis of no significant difference between the mean scores.

A standardized personality inventory will be administered to determine the differences in degrees of self-perception and affective development gains between the control and experimental groups. The Personal Orientation Inventory (POI) will be used to study affective differences.

PART II

INTRODUCTION, PROCEDURE, AND IMPLEMENTATION

Introduction.

The Nebraska Technical Community College System has now been in existence for almost two years. The six Community College Areas and the eleven institutions which compose the system are charged with providing comprehensive curriculum and course offerings for those who eventually transfer to four year institutions, those who enter the world of work, and those who desire upgrading and development of present skills.

One of the exciting challenges for the community college educators and administrators in the Nebraska system relates to designing curriculum to achieve an effective and efficient balance of courses which are considered "general" and courses which are considered "technical or specific" (i.e., relating to the major). Also enigmatic is the approach to some general education courses, as they apply to students and occupational curricula. For example, Written Communications as a required course has been taught to vocational majors in its purest liberal arts form as well as modified into courses for various target groups (e.g., Written Composition for auto mechanics, machinists, and secretaries). Oddly enough, one is hard pressed to find courses such as English Composition for the music major, the chemistry major, or the art major.

During the Fall Semester, 1974 four Written Communications I classes taught on the Platte Technical Community College Campus were designated to participate in this research study. Two classes were taught as experimental groups (in the world of work context) and two were taught as control groups (in the liberal arts context). Each of the groups was composed of students who were in transfer and vocational programs. The distribution of vocational majors and other transfer majors in each class was about 50-50.

This Nebraska Research Coordinating Unit (RCU) sponsored project, "A Vocational Approach to Written Communications," was designed on the premise that all individuals who are enrolled in credit programs and courses at Platte Technical Community College are preparing for an occupation and for the world of work. Some students will enter the arts and sciences, while others will enter agriculture occupations, trade and industrial occupations, business and office occupations, distributive occupations, health and human service occupations, and home economics related occupations.

Before deciding on the final design for the research project, an extensive search of literature was conducted. However, research efforts in adapting the career education concept to written communications have been primarily on the elementary and secondary levels. Furthermore, world of work oriented research projects on the post-secondary level were directed toward the vocational or occupational major. This study included a cross section of community college students enrolled in day sections of Written Communications I.

Statement of Problem

The problem was to evaluate student's cognitive and affective development in achieving written communication objectives placed in the context of the world of work. The following hypotheses were formulated to evaluate students' development.

1. No significant difference between E_1 , E_2 and C_1 , C_2 in cognitive development.
2. No significant difference between E_1 , E_2 and C_1 , C_2 in affective development, as measured by the twelve dimensions on the Personal Orientation Inventory (POI).¹
3. No significant difference between E_1 and E_2 in cognitive development.
4. No significant difference between C_1 and C_2 in cognitive development.

These hypotheses were accepted or rejected on the basis of analysis of data using the "t" test. The level of significance for each of the two-tailed tests was set at .10.

Assumptions

1. The four projects designed by the instructors provided valid experiences in a simple to complex cognitive progression.
2. The criteria rating instrument for each of the projects provided a valid measurement of cognitive achievement.

¹Personal Orientation Inventory is available from Educational and Industrial Testing Service, P. O. Box 7234, San Diego, California 92107.

3. The four raters (instructors) achieved sufficient inter-rater reliability as a result of designing the criteria rating instruments and periodically exchanging and evaluating papers.

Definition of Terms

Experimental Groups (E_1 and E_2): written communications set in the context of the world of work.

Control Groups (C_1 and C_2): written communications in a liberal arts context.

PTCC: Platte Technical Community College. A college of the Central Nebraska Technical Community College Area.

Significance

This research study was designed to deviate from the traditional curriculum pattern of isolating vocational content and liberal arts content. The two experimental groups provided an integrated approach to dissolving fragmented course content into a system of instruction which employed not only community college resources, but also world of work resources, and community resources. The results of the experimental approach are perceived as providing a new dimension in regard to curriculum planning in vocational education and general education programs. Because there were considerable career activities involved in the project, the results have strong implications not only for other comprehensive two-year post-secondary institutions, but also for elementary and secondary schools.

Objectives

	<u>Process</u>	<u>Product</u>
1. To establish if Platte Technical Community College students enrolled in written communication courses would achieve a higher level of proficiency in accomplishing the specific cognitive objectives when the objectives were placed in the context of the world of work, or when the same cognitive objectives were placed in a liberal arts context.		X
2. To establish if Platte Technical Community College students enrolled in written communication courses would achieve greater self-perception at the end of a given semester after accomplishing affective written communication objectives placed in the context of the world of work, or after accomplishing the same affective written communication objectives placed in a liberal arts context.		X
3. To conduct in-service workshops with PTCC staff who were involved in the project.	X	
4. To outline each written communications course which included units of instruction, cognitive and affective objectives, assignments, and objective-based evaluation sheets for four major written projects.	X	

	<u>Process</u>	<u>Product</u>
5. To survey the world of work as it relates to written communication. (And to communicate findings in written form.)	X	
6. To provide students with skills to make career decisions.		X
7. To experiment with greater use of community resources in the development of decision-making skills.		X
8. To show the relationships between vocationally-oriented written communications and the development of self-identity, the psycho-social aspects of work, and career goal setting.		X

Procedure and General Design

In this research project, the post-test only control group design was used to determine cognitive and affective differences. Full-time day students were selected at random to establish the two experimental and the two control groups. Randomization among the four groups was accomplished through standard college registration procedures.

The course under study was Eng 121 Written Communication I which appeared in the 1974/75 catalog as follows:

Eng 121 Written Communication I

The student acquires a working knowledge of the decision-making process and applies his knowledge of the process to the structuring of written communication. The student will structure compositions which are compatible in mode and form to his special career, academic or creative interests.

- A - The decision-making process
- B - General modes of decision-making and general forms of composition structure
- C - Specialized modes of decision-making and specialized forms of composition structure.

Similarities and Dissimilarities Between

The Experimental and Control Groups

	<u>Control</u>	<u>Experimental</u>
1. The progression in the cognitive domain was from emphasis upon the decision-making process to general modes of decision-making and general forms of composition structure to specialized modes of decision-making and specialized forms of composition structure.	X	X
2. Cognitive objectives were placed in the liberal arts context.	X	
3. Cognitive objectives were placed in the world of work context.		X
4. Emphasis in the affective domain was placed upon the twelve classifications of the Personal Orientation Inventory.	X	X
5. The inquiry method of instruction was used in attaining cognitive and affective objectives.	X	X

	<u>Control</u>	<u>Experimental</u>
6. Learning resources primarily included selected liberal arts texts, written resources, and audio-visual materials.	x ²	
7. Learning sources included intrapersonal communication, interpersonal communication, audio-visual materials, written resources, and world of work resources from the community.		x ³
8. Objective-based criteria was employed to evaluate the four major student projects.	X	X

Analysis of proficiency achieved in control groups and experimental groups determined the extent to which the objectives were valid and had been achieved. Cognitive achievement was based upon four criterion measures generated from four written projects. Affective differences were determined by administering the Personal Orientation Inventory (POI). This standardized forced choice inventory yielded scores on twelve dimensions of self-actualization. Self-actualization refers to the tendency of an individual to develop and utilize his unique capabilities, or potentialities, which are free of inhibitions and emotional turmoil of those less self-actualized. The POI was administered at the end of the semester.

Location

The project was conducted during the Fall term (August 26 to December 20) 1974 at Platte Technical Community College, Columbus, Nebraska.

²Resources are included in the Bibliography.

³Ibid.

Each of the four courses met a total of three contact hours per week. The courses were scheduled on Monday, Wednesday, and Friday at 8:00 am, 9:00 am, 11:00 am, and 1:00 pm.

Population

Population consisted of four written communication classes in which students were selected at random. Original class sizes for the E₁ and E₂ were 25 and 25 and class sizes for C₁ and C₂ were 23 and 26. Class numbers at the end of the semester for E₁, E₂, C₁ and C₂ were 24, 25, 19 and 23 respectively. These attrition figures represent those who withdrew from school and those who withdrew from class. None of the students in the experimental groups withdrew from class; however five students (10 percent) in the control group withdrew from class. The average class and/or school attrition rate at Platte Technical College is 15 percent.

Randomization among the four sections of Eng 121 was accomplished through standard registration procedures.

Implementation

General and specific cognitive written communication objectives were determined by the four full time Platte Technical Community College English instructors who participated in the project. Each instructor was assigned one group on the basis of his/her preference. The two experimental groups completed the cognitive objectives in the world of work context; whereas the two control groups completed the cognitive objectives in a liberal arts context.

The instructors and the project directors met several times during the months of July and August to discuss the project objectives for each assignment and the criteria for rating each of the four assignments. The project team decided to structure the four projects according to a simple to complex cognitive progression. The emphases of the four projects were:

1. Identification - Definition and Illustration
2. Classification - Comparison and Contrast
3. Analysis
4. Synthesis

The relation of each project to Bloom's and Kratawohl's Cognitive Taxonomy follows:

<u>Projects</u>	<u>Cognitive Level</u>
1. Identification - Definition and Illustration	1.20
2. Classification - Comparison and Contrast	2.00
3. Analysis	4.00
4. Synthesis	5.00

The assignment and criteria for each of the four projects appear in Appendix A. As was previously noted the experimental and control groups used the same assignment and criteria rating sheets with the topics for writing chosen from the world of work or liberal arts context. The instructors also used common criteria for evaluating each project.

Projects were completed on approximately four week intervals and each project was scored on the basis of 40 possible points. Inter-rater reliability was established on the basis of instructors reaching common agreement on the development of criteria for each project and on the

basis of instructors discussing the criteria among themselves as the project progressed. Also in regard to inter-rater reliability the instructors exchanged papers periodically not only for consistency in interpreting criteria, but also for continued consistency of standards relative to cognitive progression. Verbal agreement among raters was assumed to be an accurate indicator of inter-rater reliability without computing a correlation coefficient among the raters.

The project team and Mr. Elton Mendenhall, Director of the Nebraska RCU thought it desirable to have a third party consultant for the project. Dr. Larry Andrews, Assistant Dean of Graduate School at UNL and Professor of English was hired as a consultant.

Dr. Andrews' visit was to take place while the project was in progress. However, postponements due to illness and weather did not permit his visit with the project team until February 12, 1975. His summary remarks appear in Appendix B.

PART III

ANALYSIS OF THE DATA

In this part of the report the results of each of the four projects and the POI will be presented in tabular and descriptive form. The results for each "t" test for each of the four projects are discussed separately; then summary results for all four projects are presented. All tests for significance were two-tailed with the level of significance set at .10. Therefore, the hypotheses were actually accepted or rejected on the basis of a .05 level of significance.

As a means of reaching a greater understanding of the nature of experimental and control groups, some basic background information concerning each was organized and displayed in Table 1 and 1A

Some of the observations that can be made by perusing the tables follow. First, the distribution of transfer and vocational majors in the experimental and control groups is about even. Second, the average age of the students in the experimental and control groups is about the same. Third, over half of the students are working while attending school. Fourth, 88 percent of the students in the experimental and control groups are freshmen. On the basis of the characteristics just discussed, it appears that the four groups represent a random sample of the population in freshmen classes.

Table 1

BACKGROUND INFORMATION

EXPERIMENTAL (E_1 and E_2)

	Men	Women	Total	Major						WC	WS	Year	
				Tr	%	Voc	%	Und	%			F	S
E_1	13	12	25	11	44	12	48	2	8	0	1	21	4
E_2	8	17	25	11	44	11	44	3	12	0	0	21	4
Total	21	29	50	22		23		5		0	1	42	8

Average Age 18.90
 Average of Course Grades 2.98/4.0
 Number of Working Students 28
 %Working Students 58

WC indicates withdrew from class.
 WS indicates withdrew from school.

Table 1A

BACKGROUND INFORMATION

CONTROL (C_1 and C_2)

	Men	Women	Total	Major						WC	WS	Year	
				Tr	%	Voc	%	Und	%			F	S
C_1	13	10	23	7	30	15	65	1	4	3	1	20	3
C_2	14	12	26	13	50	9	34	4	15	2	1	25	1
Total	27	22	49	20		24		5		5	2	45	4

Average Age 19.03
 Average of Course Grades 2.81/4.0
 Number of Students Working 21
 %Working Students 42

WC indicates withdrew from class.
 WS indicates withdrew from school.

PROJECT 1

The first English composition completed by the experimental and control groups was on definition and illustration. Major emphasis of the experimental (E) group themes was on such things as how one's identity is affected by his job and his identity in the world of work. During the discussion that preceded the actual writing of theme, E. group students were introduced to the tinker toy communication game, various explanations of definition, and a slide series on man's search for identity. The E group discussion culminated in themes which were highly structured, limited to five paragraphs and written about careers. Some typical titles of these themes were: "Can a Man Find Self-identity in Farming?", "How can an Individual's Job Help Him Find Identity," "I Function Better in Small Group Situations," and "I Love to Lead."

In the control (C) groups the slide series on man's search for identity was also used along with several examples of prose and poetry which were used to show how description and illustrations are used in various life situations.

The emphasis in the C groups was placed on definition and illustration as cognitive thought processes rather than using the processes to explore career considerations. Examples of titles of themes written include titles such as: "Definition: What is a Friend?" "The Many Faces of Love," "Abortion is Murder," and "Heroes Fight for Their Convictions." Themes in the four instructors' classes were prepared out of class.

The data for the project 1 t tests appear in Table 2. Data are given for the analysis of E_1 and E_2 , C_1 and C_2 , and E_1 , E_2 and C_1 , C_2 . Computing the t value at .10 or .05 for each side of the two-tailed test the calculated t was significant if it exceeded a tabled t value of 1.68.

As shown in Table 2, significance occurred between the two experimental groups. This can be explained in part by the fact that the E_1 group wrote according to a very structured theme format; whereas, the E_2 theme format was not as structured, (e.g., in E_1 the theme was limited to five paragraphs, and with the objective of each paragraph clearly stated). In C_1 and C_2 there was much similarity in defining and clarifying the objectives and structure of the theme. The significant difference between E_1 and E_2 seems to suggest that for the first assignment, (which involved 88 percent freshmen for E and C groups) first term freshmen students performed better in a very well defined structured approach to a composition.

Table 2

PROJECT 1

Groups	N	Means	t Value	S/N
E_1 and E_2	49	28.360 - 22.916	3.3318	S*
C_1 and C_2	42	23.588 - 25.000	0.57596	N
E_1 , E_2 and C_1 , C_2	91	24.428 - 25.693	0.86951	N

*Significant at .05 when $t \geq \pm 1.68$.

PROJECT 2

The second project was on classification and comparison - contrast. The objective of this project for E₁ and E₂ was to explore through classification how the psycho-social aspects of work affect the individual on the job. The process of individual classifications involved having the students first identify their own ego needs, career goals, and drives. Each group (E₁ and E₂) then classified themselves into smaller groups according to their inputs. The next step was to take E₁ and E₂ plus three additional classes taught by the instructors (of E₁ and E₂) and classify the large group into smaller groups, in the same manner as was done in the E₁ and E₂ groups, using essentially the same information. While in the large group, students saw the enormous task of classifying 130 people (with data assembled) into categories so each could pursue the psycho-social aspects of the work world in respect to a special benefit to himself and thus provide him with material for a composition. These small groups then interviewed people in the community to ascertain their feelings about their jobs. The information obtained during the interviews became the data source for individual students compositions in E₁ and E₂.¹ Some example topics of compositions are: "Psycho-social Effects of Work," "Requirements, Experience, and Appearance Are Important in Law Enforcement," "Psycho-social Aspects of Work," and "Living on the Job."

¹Article in school paper on interviews, reproduced in Appendix C.

The students' reaction to the interviewing process were very positive. Students enjoyed the opportunity to become involved with people in the community and thought they learned much from the activity. During the four weeks spent on the project, students were concerned about what to do with the information after it was gathered. Classroom discussion on processing action type data enabled students to adequately communicate their findings. Instructional media used in E_1 and E_2 included a communication game titled, "Who Owns the Zebra?" Handouts on "Make Your Job Pay More Than Money," and an explanation of interviewing procedures, a slide set on "Man and His Values; an inquiry into good and evil," textbooks such as Working by Studs Terkel, The Struggle for Significance, by Brennecke and Amick, The Nature of Work by Alan Kraus, The Future of Work by Fred Best, Tempo, Life, Work, and Leisure by Cummings and Herum, and Worlds in the Making by Mary Jane Dunstan. The final E_1 and E_2 group compositions were completed out of class.

In the control groups class activities focused on the theories involved in classification. Students explored various ideas by completing standard classification charts to at least the fourth level. Students then used these classification charts as the basis for their comparison and contrast essays. Final essays were an out of class assignment.

Comparison and contrast procedures were further applied by studying selected readings which included, "What Really Hurts," by Eric Sevareid, and "I Have a Dream," by Martin Luther King, Jr., along with books such as Serpico and The Godfather. In the control groups the instructors did not coordinate the materials or use the same materials. Examples of

theme topics completed by C₁ and C₂ students include the "Anti-discrimination Laws," "Unequal Justice," "Being a Student Versus Working," "Summerhill and Montessori," and "Job Opportunities." The statistics for the second project appear in Table 3.

The data indicate that although the means for E₁ and E₂ were slightly higher than C₁, C₂ the differences were not significant. Nor were there significant differences between E₁ and E₂ and C₁ and C₂. There was also no significant difference between projects one and two for E₁ and E₂ and C₁ and C₂.²

These data seem to suggest that the instructor's cognitive objectives were achieved from active community based activities and from quixotic type classroom activities.

Table 3

PROJECT 2

Groups	N	Means	t Value	S/N
E ₁ and E ₂	47	27.826 - 26.041	.84119	N
C ₁ and C ₂	40	27.800 - 24.400	1.5553	N
E ₁ , E ₂ and C ₁ , C ₂	87	26.914 - 25.675	.81738	N

Significant at .05 when 5 ± 1.68

²Complete analysis of the project comparisons appear in Appendix D.

PROJECT 3

The third project was structured to give students an opportunity to deal with analysis and cause-effect as communication tools. In the experimental groups analysis was developed in regard to how the decision-making process affects the individual. However, instructors of the experimental groups made an effort to avoid strict establishment of a single parameter for the project in order to allow students the freedom to explore choices, options, and alternatives. Students in the experimental groups were not specifically instructed to write about careers and career related matters. The requirement was purposely not stipulated to see how students would write their themes. About 90 percent of the students actually chose to write about life role type and career related themes. The activities in class during the third four week interval included a PTCC math instructor who presented a short course on the creative problem solving process developed by the Creative Education Foundation at State University College at Buffalo, a PTCC guidance counselor who discussed various types of interest inventories and other career information, a filmstrip on educational decision-making and a panel discussion. Members of the community who served as panelists related how they had made decisions in their lifetime, and the effects of those life and career decisions. The final drafts of the papers were written outside of class. Some example topics of themes were, "Cause and Effects of My Career Decision," "Cause and Effects in Decision-making," "A Process of Decision-making Will Make Me Control What Happens to Me."

In the control groups the study of analysis began with the following questions: What is the quality of man's life? and How does man control the quality of his life? The Killers, a film release of the 1960's, was shown, and The Killers, a short story by Ernest Hemingway, was read. Film strips dealing with "Man's Pursuit of Happiness," and "Man in a Technological Society," were presented and essay by William L. Laurence, "Now We Are All Sons-of-Bitches" was read. Questions presented for analysis included a consideration of "the real differences between a laboratory test and a life experience"; of "the relationship of art to man's technological advancement"; of what "is the most demanding (immediate or difficult) problem man faces." Example theme topics chosen by individual students included "Free Man and His Laws," "Drug Abuse and Social Problems," "The Four Seasons," and "The Nature of Evil." Students had the option to present the analytical project as a written composition or oral presentation. The statistics for third project appear in Table 4.

The data analyses in Table 4 indicate that the only set of t tests that was significant was the E_1 and E_2 comparison. As was previously indicated, the E_1 and E_2 instructors took a less structured approach (compared to projects 1 and 2) in regard to the way the requirements of project three were presented. A significant difference was also noted between E_1 and E_2 on the first project. It was pointed out then (in regard to project one) that the E_1 group was presented in a somewhat more structural approach to the development of the project than was the E_2 group. On the third project the E_1 instructor noted that student responses to the activities, especially the panel were very positive. The approach that had been

emphasized on projects one and two (in E_1) had enabled students to use the objective based structure techniques to communicate their research findings in the form of project 3.

Table 4
PROJECT 3

Groups	N	Means	t Value	S/N
E_1 and E_2	45	34.619 - 27.208	3.6466	S*
C_1 and C_2	36	27.600 - 27.952	-.12015	N
E_1 , E_2 and C_1 , C_2	81	30.666 - 27.805	1.5826	N

*Significant at .05 when $t \geq \pm 1.68$.

During the third party evaluation the project director was able to discuss the classes with students from the E and C groups. Comments concerning all four classes were quite favorable; however, students in the E_1 group indicated that the class was effective in using a decreasing "structure" format in helping them communicate and investigate careers and work. Students in E_2 indicated they lacked some direction and were not sure what the objectives of each project (particularly the first three) were.

It is also possible that part of the E_1 , E_2 difference could be attributed to the instructor's interpretation of the project rating criteria. During the discussion of the statistics of the third project with the project team, the instructors were asked to exchange project 4 papers as an inter-rating reliability check in regard to the project criteria.

As can be seen in Table 4, the means for C_1 and C_2 were quite close. In discussing the third project with the C_1 and C_2 instructors, their comments and the statistics indicate the following: First, there was considerable agreement in interpreting the project rating criteria; Second, the C_1 and C_2 instructors used the same decreasing structure format as the E_1 and E_2 group; Third the instructional materials used by the C_1 and C_2 instructors differed but that did not affect the extent to which the objectives were achieved.

In regard to overall achievement on a group basis (E_1 , E_2 and C_1 , C_2) there was a significant difference between projects 1 and 3 (E_1 , E_2 and C_1 , C_2), and between projects 2 and 3 (E_1 and E_2 only). These statistics may suggest that real life community activities enhance achievement; to a greater extent than do strictly classroom activities. The fact that the project 3 t test for E_1 , E_2 and C_1 , C_2 is approaching significance also indicates strong support for community based activities.

PROJECT 4

The cognitive development emphasized in this project was synthesis. For the fourth project the experimental groups spent four weeks investigating "how the future roles of individuals will be different from today's

roles." The specific objective of the project was to have students visualize how definition, classification - comparison and contrast, and analysis are cognitive continuums and not individual blocks of thought processes. Another way of expressing synthesis is "putting it all together." By the fourth project students in the experimental groups had begun to see the term "career" to mean more than an isolated job. As a result, students were given the opportunity to do a living composition (or a role playing situation) in addition to a written composition. The living composition involved playing out a life experience situation to show the evolution of change within that situation. The written part of project four was as an in class activity in which each student, using the same previous structure and process, (developed in projects 1 - 3) demonstrated his understanding of the use of definition, classification, and analysis as parts of a thought continuum.

Project four instructional media included a communication game of survival, a selection on "Learning," by Allen Tough, the book, Future Shock by Alvin Toffler, a slide series on "Designing Tomorrow Today," and the role playing activity. Student reaction on this project was extremely favorable. All those students who were involved in the third party evaluation indicated the living composition was probably the highlight of the semester's work. Some examples of title themes are "Synthesis and Action," "Four Major Learning Factors," "A Human Being Can Make Choices," and "By Establishing an Educational Pattern, I Can Be Creative All My Life."

In the control groups, synthesis was approached as creative problem-solving, a technique of discarding "rut-thinking," pursuing analysis and definition, deferring judgment, establishing criteria for solution finding, and selling the final decision. Students were asked to identify a "mess" and proceed from there to develop a synthesis. This project was set up on an independent learning basis with most class sessions held in the resource center. The final student project was to include a thorough investigation of the topic in addition to a format of presentation which employed the methods previously studied - definition, illustration, comparison and contrast, classification, and analysis. Examples of themes include "Open Marriage," "Decriminalizing Pot," "The Educated Person," and "The Elements of Culture."

The calculated data for the fourth project were transferred into Table 5.

Table 5

PROJECT 4

Groups	N	Means	t Value	S/N
E ₁ and E ₂	46	31.409 - 30.125	.77237	N
C ₁ and C ₂	38	28.636 - 26.312	.89653	N
E ₁ , E ₂ and C ₁ , C ₂	84	30.739 - 27.657	2.0909	S*

*Significant at .05 when $t \geq \pm 1.68$

The analyzed data indicate that the experimental and control groups were quite close in regard to means and variance. However, there was quite a significant difference between the experimental groups and the control groups in cognitive gains. It was previously pointed out that real life action-type activities tend to create more meaningful approaches to learning. These statistics again point to the value of employing realistic experiences as a means of developing written communication skills and cognitive thought processes. In regard to achievement from the first to fourth project, not only was there a significant difference between projects 1 and 4 for the two experimental groups, but also for the two control groups. There was not a significant difference between projects 3 and 4 for either the experimental or the control groups.

SUMMARY OF THE FOUR PROJECTS

Summary data for testing the research hypotheses appear in Table 6.

Table 6

DATA FOR ALL PROJECTS (1 - 4)

Groups	N	Means	t Value	S/N
E ₁ , E ₂ and C ₁ , C ₂	344	28.438 - 26.273	2.6807	S*
E ₁ and E ₂	187	30.406 - 26.572	3.778	S*
C ₁ and C ₂	157	26.985 - 25.715	1.0145	N

*Significant at .05 when $t \geq \pm 1.645$.

The original problem of the study was to evaluate students' cognitive and affective development in achieving written communication objectives placed in the context of the world of work. Three of the four hypotheses formulated relate to cognitive development. Each of them is restated for the purpose of acceptance or rejection.

No significant difference between E_1 , E_2 and C_1 , C_2 in cognitive development. (H_{01})

This hypothesis was rejected on the basis of the significant t value calculated for all four projects. (First entry in Table 6.)

No significant difference between E_1 and E_2 in cognitive development. (H_{03})

This hypothesis was also rejected on the basis of the significant t value calculated for all four projects. (Second entry in Table 6.)

No significant difference between C_1 and C_2 in cognitive development. (H_{04})

This hypothesis was accepted on the basis of the non-significant t value calculated for all four projects. (Third entry in Table 6.)

From the test of these hypotheses one can conclude that there was an overall difference in cognitive achievement between the experimental and control groups; there was a difference in achievement between E_1 and E_2 ; and that the C_1 and C_2 group had about the same achievement.

In regard to the experimental groups, these data clearly indicate that the emphasis placed on careers, decision-making, and community resources were not only valid objectives for the project, but also created activities which were instrumental in helping students improve

cognitive skills, and written communication skills. The approach taken in the experimental groups was also instrumental in helping students look at careers as integrated system of jobs which cover the entire work life of an individual. Given the fact that an individual will hold at least seven different full time jobs during his working lifetime the students' development of a career concept or being career minded is an asset not only to himself, but also to future employers. It was evident to the instructors that the inquiry into the various dimensions of careers (e.g., careers as they relate to the growth and development of individuals, and communities) was more meaningful and thought provoking than talking about a specific or isolated job.

In regard to the control groups the data analysis and the instructor's comments indicate that the approach taken was instrumental in helping the students assess world problems and accept individual responsibility as a world citizen. Given the fact that students must interact in a huge complex social structure, the development of tolerances for others values, customs, and attitudes are desirable and worthwhile activities.

POI

The Personal Orientation Inventory (POI) was administered at the end of the semester after the fourth project was completed. This standardized instrument was used to determine any differences in affective development between the experimental and control groups, as a result of the written communication course and other activities students did during the semester. The POI shows the degree to which an individual's attitudes and values compare with those of self-actualized people. A self-actualized person is one who is more fully functioning and who lives a more enriched life than does the average person. Such a person is developing and utilizing his unique talents to the fullest extent. It is generally agreed that a self-actualizing person might be seen as the desired result of the process of counseling or psychotherapy.

The results of the POI are presented in two general categories. First an analysis of the ratio scores, and second an analysis of the profile scores. There are two types of ratio scores - the time incompetent - time competent ($T_I - T_C$), and the other support - inner support ($0 - I$). The $T_I - T_C$ ratio is an indicator of three basic components: past, present, and future. The T_I person is one who lives primarily in the past, with guilts, regrets, and resentments, and/or in the future, with idealized goals, plans, expectations, predictions, and fears. In contrast to the T_I person, the T_C person lives primarily in the present with full awareness, contact, and full feeling reactivity. Because the self-actualizing person is not perfect, he is understood to be partly T_I and partly T_C . His $T_I - T_C$ ratio is, on the average, 1 - 8, which

means he lives primarily in the present and only secondarily in the past or future. A ratio significantly lower than 1 to 8 (e.g., 1 - 3) suggests that an individual is more time incompetent than the self-actualizing person. On the other hand, a ratio of 1 - 10 suggests that an individual is excessively time competent and this may reflect a need to appear more self-actualized than an individual really is.

The support ratio (other - inner) rates the self-actualized person as both "other directed" in that he is dependent upon and supported by other person's views, and he is also "inner directed" in that he is independent and self-supportive. The 0 - I ratio of a self-actualizing person is on the average 1 to 3, which means that a person depends primarily on his own feelings and secondarily on the feelings of others in his life decisions. A ratio higher than 1 to 3 (e.g., 1 to 4) or above indicates an exaggerated independence and reflects a need to appear "too self-actualized" in responding to the POI. A ratio lower than 1 to 3 (e.g., 1 to 1), suggests that an individual is the dilemma of finding it difficult to trust either his own or others' feelings in making important decisions.

The POI composite ratios for the experimental and control groups appear in Table 7. The $T_I - T_C$ ratios for both the experimental and control groups are very close and they indicate that the respondents are slightly more time incompetent than the self-actualized person. In regard to the 0 - I ratios for the experimental and control groups, the respondents show a trend of being too self-actualized, or somewhat independent.

Table 7

POI RATIO SCORES

	N	$T_I - T_C$	O - I
E_1 and E_2	44	3 - 6	1 - 5
C_1 and C_2	33	2 - 6	1 - 5

Considering the average ages of the students and their limited experience in the world of work, the level of time incompetence with their future ahead of them is not too surprising. The higher than average O - I ratio with a tendency to be more independent than the average self-actualized person is not too surprising for rural midwesterners. In fact, independence is somewhat of a cherished rural midwestern trait.

The POI profile scores are calculated for the twelve dimensions of self. A brief description of the elements and their assorted descriptors follow:³

- | | |
|-----------------------------|-------------------------------|
| 1. Time Competent (T_C) | - lives in the present |
| Time Incompetent (T_I) | - lives in the past or future |

³As outlined in the POI Profile Sheet.

- | | |
|-------------------------------------|---|
| 2. Inner Directed (I) | - independent, self-supportive |
| Other Directed (O) | - dependent seeks support of others' views. |
| 3. Self-actualizing Value (SAV) | - holds values of self-actualizing people as opposed to, rejects values of self-actualizing people. |
| 4. Existentiality (EX) | - flexibility in application of values as opposed to rigid in application of values. |
| 5. Feeling Reactivity (FR) | - sensitive to own needs and feelings as opposed to insensitive to own needs and feelings. |
| 6. Spontaneity (S) | - freely expresses feelings behaviorally as opposed to fearful of expressing feelings behaviorally. |
| 7. Self Regard (SR) | - has high self worth as opposed to has low self worth. |
| 8. Self Acceptance (SA) | - accepting of self in spite of weaknesses as opposed to unable to accept self with weaknesses. |
| 9. Nature of man, Constructive (NC) | - sees man as essentially good, as opposed to sees man as essentially evil. |

- 10. Synergy (SY) - sees opposites of life as meaning fully related as opposed to sees opposites of life as antogenesis.
- 11. Acceptance of regression (A) - accepts feelings of anger or aggression as opposed to denies feelings of anger or aggression.
- 12. Capacity for intimate contact (C) - has warm interpersonal relationships as opposed to has difficulty with warm personal relationships.

The data for the twelve dimensions for the experimental and control groups are recorded in Table 8.

The only dimension in which significance occurred was "capacity for intimate contact." The control groups had the higher mean scores. Other dimensions in which the control groups had higher scores (the higher the score the more similar are the responses to the self-actualized person) include time incompetent, inner-directed, self-actualized value, existentiality, spontaneity, self-regard, self-acceptance, nature of man, acceptance of regression. That is, on ten of the twelve dimensions the control group responses were more like the responses of a self-actualized person than were the responses of the experimental groups.

The hypothesis that relates to the POI was originally stated as:
No significant difference between E_1 , E_2 and C_1 , C_2 in affective development, as measured by the twelve dimensions on the Personal Orientation Inventory (POI). (H_{02})

Table 8
POI PROFILE SCORES

DEVIATION	EXPERIMENTAL (N = 44)	MEANS CONTROL (N = 33)	t VALUE	SIGNIFICANT/ NONSIGNIFICANT
T _I	7.500	7.5757	-0.10654	N
T _C	15.500	15.424	0.10654	N
O	47.045	44.212	1.2276	N
I	79.250	82.272	-1.2662	N
SAV	19.068	19.969	-1.3574	N
EX	18.590	20.181	-1.6334	N
FR	15.659	15.393	0.46811	N
S	11.931	12.696	-1.3137	N
SR	10.931	11.636	-1.2952	N
SA	14.340	15.181	-1.1572	N
NC	11.318	11.484	-0.34833	N
SY	6.7045	6.4545	0.72248	N
A	15.250	16.000	-1.0524	N
C	15.977	17.545	-1.9822	S*

*Significant when $t \geq \pm 1.67$

This hypothesis was accepted on the basis of only one of the twelve dimensions being statistically significant. In the control groups, greater emphasis was placed on values, feelings of self perception, awareness, and interpersonal sensitivity as they relate to man. It appears that the increased emphasis on values and the nature of man resulted in the control students having a more self-actualized profile than the experimental students. Even though the results of the POI were not statistically significant, there is evidence that the control group students achieved greater affective development gains than did the experimental group students.

OTHER OBSERVATIONS

A series of meetings was held with the project team before the start of the fall semester and during the fall semester. The purpose of the meetings was to design the projects and the criteria rating sheets. Meetings during the semester were held after the completion of each of the four projects. During these "post-project" meetings the instructors discussed the class activities, the student responses to the projects, and the results of the statistical "t" tests. These meetings proved to be very effective in helping the instructors gain a better understanding of the research project, and to look objectively at the dynamics of the experimental and control groups. In addition, the meetings provided an opportunity for the project team to share the concerns, frustrations, successes, and doubts which accompany any research project.

Another non-statistical observation made was the importance of instructing classes by objectives (IBO). When the project assignment sheets were used as designed and objectives were made clear, students had a sense of direction and felt comfortable with the learning experience.

PART IV

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

SUMMARY

The purpose of this RCU sponsored study was to evaluate students' cognitive and affective development in achieving written communication objectives placed in the context of the world of work compared to written communications objectives placed in the liberal arts context. This study was conducted during the fall semester 1974 on the PTCC campus. It involved four classes of Written Communications I (Eng 121). Two classes were designated as experimental (E_1 and E_2), and were taught in the world of work context. The other two classes were designated as control (C_1 and C_2) and were taught in the liberal arts context.

During the months of July and August the four instructors involved in teaching the courses designed four written projects on a simple to complex cognitive progression and developed the evaluation criteria for each project. The four projects were identified as: Identification - Definition and Illustration, Classification - Comparison and Contrast, Analysis, and Synthesis. These projects were completed on approximately four week intervals. Pre-project meetings were instrumental in bringing the four instructors together for the purpose of reaching agreement on the development of the compositions, the objectives of the course/assignment, and the evaluative criteria.

Affective development gains were determined on the basis of the Personal Orientation Inventory (POI). The POI is a standardized instrument which shows the degree to which an individual's attitudes and values compare with those of self-actualizing people. This instrument was administered at the end of the semester.

Data for the four written communications projects and the POI were analyzed by using the two tailed "t" test with the level of significance set at .10 (or .05 for each tail). Non-statistical information was compiled in the form of logs maintained by each instructor.

During the fall semester the project team met on six occasions to discuss the results of the statistical tests and other project related activities. These meetings served the purpose of maintaining continuity through the project and helped the project team achieve the project goals and objectives. The constant communication during the project on the part of the project team was a significant part of this study. These activities provided a vehicle which resulted in substantial professional growth and development of the project team.

CONCLUSIONS

The following conclusions are based upon the analysis of the data for the four written communications projects, the analysis of the POI data, and the non-statistical observations:

1. The cognitive development gains of the experimental students (E_1 and E_2) were significantly higher than those demonstrated by their control counterparts (C_1 and C_2).

2. The cognitive development gains of the students in E_1 were significantly higher than the cognitive development gains of the students in E_2 .

3. The cognitive development gains of the students in C_1 were higher, but not significantly higher than the students in C_2 .

4. The students in the experimental groups (E_1 and E_2) made significant cognitive gains from the first project to the third and fourth, and from the second project to the third and fourth.

5. The students in the control group (C_1 and C_2) made significant cognitive gains from the first project to the third and fourth, and the third project scores were slightly higher than the fourth project.

6. The experimental and control group students' POI ratio scores were almost identical. Both experimental and control group students were somewhat more time incompetent than the self-actualized person, and were somewhat more independent than the self-actualized person.

7. The POI profile scores were different, but not significantly, between the experimental and control groups. The control group profiles on ten of the twelve dimensions were more like those of the self-actualized person than were the experimental group profiles, which means the control group students achieved greater affective development gains than did the experimental group students.

8. The majority of students in both the experimental and control groups reacted positively to the different approaches taken in the courses. None of the students in the experimental groups withdrew from class; however, 10 percent of the students in the control groups withdrew from class.

9. The objectives of the project were valid and were achieved.
10. The in-service meetings conducted with the project team were effective in maintaining continuity throughout the project and were effective in achieving the project objectives. The meetings also provided a significant vehicle in maintaining communications among the project team.
11. The structure, design, and objectives of the four projects were effective in mapping a simple to complex cognitive progression.
12. The project criteria rating sheets provided a valid measure of the students' cognitive performance in written communications.

DISCUSSION OF THE CONCLUSIONS

These conclusions have implications for not only the technical community college curriculum, but also the technical community college students. In regard to curriculum, all classes were effective in helping students develop cognitive and affective skills. The experimental approach proved better in cognitive skill development and the control approach proved somewhat better in affective development.

Given the results of this study, other formats for the written communication courses can be designed to meet special cognitive and/or affective developmental needs of students. Regardless of the outcomes desired, a written communication course(s) should be included as a freshman requirement in the technical community college curriculum.

In regard to students, the study indicated that both transfer students and vocational students can achieve and succeed equally well in Written Communications I. However, it is most important that the

course be taught by clearly stated objectives which are made available to the students. The findings tend to refute the idea of creating special communications courses with special content for the various vocational majors (e.g., English for auto mechanics).

Several representatives of business and industries in the PTCC area indicated that they prefer that their employees have three major types of skills upon entering employment. First, knowledge of their subject matter; second the ability to get along with others, and third the ability to be able to communicate effectively. The written communications courses as taught in the experimental and control groups were affective and successful in helping students further develop their cognitive skills, affective skills, and communication skills.

RECOMMENDATIONS FOR FURTHER RESEARCH

Although this study has come to an end, it does serve as a base on which to build future research efforts. To augment this research and further build on the conclusions so they will have more general meaning and importance, the following recommendations are offered.

1. A replication of this study using the same design, activities, and instructional materials should be done at least twice in another technical community college area and/or the Central Nebraska Technical Community College Area.
2. A study using the pre-test post-test design and the same instructional materials and activities as this project should be conducted.
3. A further statistical analysis of the criteria rating sheets to establish the semantic stability of each criterion and inter-rater

reliability should be conducted.

4. A program summarizing the results and implications of this study should be developed to present to other secondary and post-secondary institutions.

5. A study using the same design context (world of work compared to liberal arts) should be conducted in other general education areas (e.g., sociology, history, psychology).

6. A follow-up study of the experimental and control group students should be conducted in 1980.

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Appendix A

Project I

Definition

1. The student will produce a written composition demonstrating the following:

___ statement of subject in clear, direct terms

___ a concise thesis statement

___ selected relevant and adequate data

2. The student will distinguish definition as a means of gathering, ordering and expressing ideas (data)

3. The student will demonstrate that he recognizes the potential and limitations of definition.

4. The student extends his influence of his audience by the use of effective illustration.

5. The student will discriminate in his choice of words in relation to definition and illustration.

6. The student will employ standard usage in grammar, mechanics and spelling.

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—

Criteria:

1. The subject is clearly identified.
A B C D F
2. A thesis statement is formulated and clearly conveyed.
A B C D F
3. Each paragraph supports thesis statement with details, examples, and explanation.
A B C D F
4. A conclusion emphasizes thesis statement.
A B C D F
5. Definition is used in focusing on the subject.
A B C D F
6. Support paragraphs translate the potentials and limitations of the definition.
A B C D F
7. Effective illustration is used to clarify meaning for the reader.
A B C D F
8. Words are precisely chosen to enhance the definition.
A B C D F
9. Grammar, punctuation and spelling are standard.
A B C D F
10. The essay is responsibly revised and proofread.
A B C D F

Project II

Classification - Comparison, and Contrast

1. The student will produce a multi-paragraphed composition demonstrating the following:
 - a restricted subject
 - a concise thesis statement
 - relevant and adequate data
 - a conclusion including re-emphasis on thesis statement, additional hypothesis and applications.
2. The student will identify classification and comparison and contrast a means of gathering, ordering and expressing ideas.
3. The student will develop classification by unified criteria which is objective, self-inclusive and discrete.
4. The student will correlate comparison and contrast with the process of classification.
5. The student will supply transitional words, sentences and paragraphs.
6. The students will write topic sentences as statements of subthesis.
7. The student will apply punctuation as a tool to clarify meaning.

Project II
Classification - Comparison, and Contrast

1. The thesis statement is precisely conveyed.
A B C D F
2. Each paragraph serves a recognized purpose, development of transaction.
A B C D F
3. Each paragraph has structure including topic sentence if needed.
A B C D F
4. The ideas are linked by appropriate transition.
A B C D F
5. Comparison and contrast are used in focusing on the subject.
A B C D F
6. Data chosen fits the classification.
A B C D F
7. Data is categorized and developed through emphasis on likenesses and differences.
A B C D F
8. Sentences are complete and express ideas effectively.
A B C D F
9. Conclusion includes additional hypothesis and applications.
A B C D F
10. Grammar, punctuation and spelling and standard and final project is proofread.
A B C D F

Project III

Analysis

1. The student will produce a multi-paragraphed composition demonstrating the following:
 - a statement of subject in clear, direct terms selected from a variety of subject introductions
 - a unified, restricted and precise thesis statement
 - relevant and adequate data
 - a conclusion including re-emphasis on the thesis statement, additional hypothesis and/or applications.
2. The student will identify the various aspects of analysis.
3. The student will identify analysis as a means of gathering, ordering and expressing ideas.
4. The student will apply causal analysis as the major means of developing his/her idea.
5. The student will supply transitional words, sentences and paragraphs.
6. The student will write topic sentences which state the controlling idea of the paragraph and define the limits of that paragraph.
7. The student will apply punctuation as a means of improving communication skills.

Project III
Analysis

1. The thesis statement is unified, restricted, and precise.
A B C D F
2. Each paragraph serves a recognized purpose, development or transaction.
A B C D F
3. Each basic paragraph has structure including a topic sentence.
A B C D F
4. The idea are linked by appropriate transition.
A B C D F
5. Ideas are defined through cause and effect relationships.
A B C D F
6. The data substantiates the decision reached through analysis.
A B C D F
7. The content is valid.
A B C D F
8. Sentences are complete and express ideas effectively.
A B C D F
9. The conclusion includes thesis, additional hypothesis and/or applications.
A B C D F
10. Grammar, punctuation, and spelling are standard and final project is proofread.
A B C D F

Project IV

Synthesis

1. The student will produce a multi-paragraphed composition demonstrating the following:
 - a restricted subject
 - a unified, restricted, and precise thesis statement
 - a conclusion including re-emphasis on the thesis statement, additional hypothesis, and/or application
2. The student will identify synthesis as a means of gathering, ordering, and expressing ideas.
3. The student will demonstrate choice and practice in synthesizing the means of exposition.
4. The student will synthesize collected data.
5. The student will synthesize his writing through transitional words, sentences, and paragraphs.
6. The student will write paragraphs with topic sentences that influence audience response.
7. The student will recognize how the term standard is applied to rhetorical devices.

Project IV
Synthesis

1. The thesis statement is precisely conveyed.

A B C D F

2. Each paragraph serves a recognized purpose, development or transaction.

A B C D F

3. Each basic paragraph has structure including a topic sentence.

A B C D F

4. Methods of exposition are effectively used.

A B C D F

5. Collected data is synthesized.

A B C D F

6. The synthesized elements create a uniquely complete composition.

A B C D F

7. The content is valid and evidences critical thinking.

A B C D F

8. The ideas are synthesized through appropriate transition.

A B C D F

9. Sentences are complete and express idea effectively and conclusions are extended.

A B C D F

10. Standard rhetorical devices are used and final project is proofread.

A B C D F

Appendix B

THE UNIVERSITY OF NEBRASKA-LINCOLN
LINCOLN, NEBRASKA 68508

OFFICE OF THE DEAN
FOR GRADUATE STUDIES, UN-L

February 19, 1975

Dr. Ronald M. Hutkin
Associate Dean-Vocational Education
Platte Technical Community College
Box 1027
Columbus, NE 68601

Dear Ron:

Thanks for all the gracious hospitality you and your colleagues shared with me during my one-day visit. I must admit there were moments in December, January, and parts of February when I wondered if I'd even get to Columbus; I'm really glad I did, now. It's gratifying to meet with people who want to talk about ideas.

Here are some observations about the written composition research project. You and the staff must temper them according to your own understandings; remember, I was there one day---you people lived with the project:

Generally, it appears to me that communication among the staff is good. They had to communicate with each other during the experimental period; that period is over now, but I sensed a willingness among the staff to continue the spirit of adventure the project helped to create. Sustaining this spirit would be a laudable goal.

Specifically, I was impressed by the fact that the students I talked to could remember not only the topic of an essay written six months earlier but also the content of it. Incredible! (How many of US have trouble recalling a note written to a colleague last week?) The students' retention of the ideas in their writing can be attributed to a number of factors, I'm sure. One of the factors---I'm just as certain---is the oral language development of concepts prior to the act of writing. Both staff and students described copious discussions about the next writing topic before the written product was to be turned in. James Moffett calls this

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 Dr. Ronald Hutkin
 February 19, 1975

activity "talking up before writing down." It's a very significant process of expatiation--enlargement/refinement of ideas/concepts. Too often we hear students tell us that when they reach the end of a paper they see (or understand) where they should've started. The students' comments indicate to me that they learned during the discussions; their papers (that is, Set #3 which I read) clearly show that the students had given thought to the papers, planned the papers' organizational scheme, and created essays which were addressing themselves to a major point with appropriate support. In short, they created coherent "wholes." That your students could do this is a boon to the staff; needless to say, not all students around the state or country do the same.

I know the staff was curious about how Platte students' writing compares with writings I've seen from other students elsewhere. The paragraph above ought to interest them.

There are a couple of difficulties with the ratings of the essays which must be noted. First, the raters knew which essays were project #1 papers, project #2 papers, and so on. Their ratings of the papers could have been influenced accordingly, i.e., we expect a student to write better at the end of the term than he did at the beginning; consequently our ratings are often affected by this expectation. Of course, we don't know if this knowledge of sequence affected the evaluations, but we would be just as correct in assuming it did have an affect as we would in assuming that it did not.

Still in the area of evaluation of the papers is the question of rater consistency. All of the staff utilized a common set of criteria for judging the essays, but did they apply the criteria in a consistent manner. For instance, we don't know with certainty that throughout the project all of the raters were consistent (either as a group or as individuals) in applying the ten categories for evaluation. If you could compute some Pearson Product-Moment Correlation Coefficients in order to determine inter-rater reliabilities, then you could speak more clearly to the issue of did the rater vary their standards from paper to paper, from project to project. If they did not, excellent; if there's a doubt, then you are faced with the problem of getting an accurate measurement with an elastic yard-stick.---it changes.

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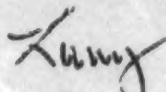
I'm writing all this without knowledge of the POI data. An interesting way to look at that information would be to consider what kind of POI profile represents a student who will write optimally in which one of the two contexts used in your study. This could assist you in advising entering freshmen. Given one kind of profile, a student might write better in one approach, and vice-versa. This would mean that you can offer the student an approach appropriate to his style, rather than offering the approach for all students.

As I suggested February 12, I would encourage you to examine the scores within groups, projects 1 through 4, in addition to the comparisons already made between groups. This may show some significant trends within either the experimental or the control group. These findings would have to be treated with care, though, since the raters had knowledge of the sequence (paragraph #6).

I've reread everything I've just written---let me assure you that I write lots about things I'm interested in. Length does not mean condemnation!

Best wishes to you and the English staff; I've enjoyed the opportunity to become involved in your project.

Sincerely,



Larry Andrews
Assistant Dean

LA:rm

Retrospect

Vol. 6 No. 3

Nov. 4, 1974

PTCC



David Lyons, editor of the Columbus Telegram, earnestly listens to the questions of PTCC students Judy Overdorf and Lu Hamilton.

Students interview area business people

During the past four weeks several of the written communication classes at Platte College have been exploring the psychosocial aspects of the work world under the direction of Ruth Anderson and Jim Weber. Both Weber and Anderson teach written communication courses at the college.

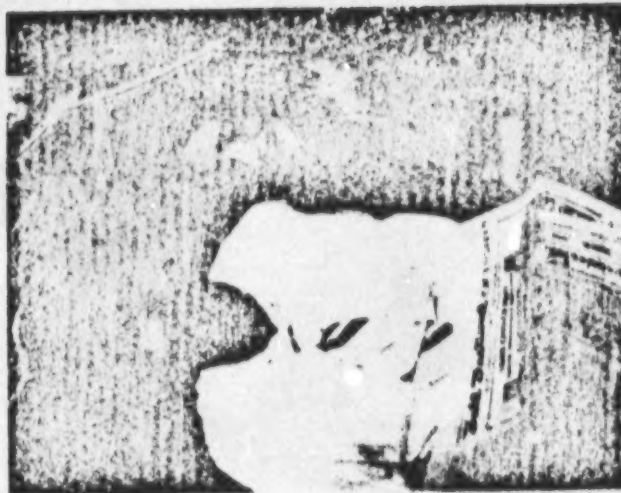
Students enrolled in these classes were divided into groups according to career interests. Interviews were set up with people in the community in fields corresponding to those of the individual groups.

Lu Hamilton and Judy Overdorf talked to David Lyons, editor of the Columbus Telegram. "I learned a lot about what goes into a newspaper," said Hamilton. "It was interesting to find out Lyons' feel-

ings of meeting deadlines. He finds it gratifying to take home his day's work in his hands. I was very impressed."

Some groups obtained worthwhile information while others had very little success with their interviews. "A lack of communication between the interviewer and the interviewee made it impossible to get the correct questions and answers back and forth," said Barb Huston. She and four other girls interviewed the director of the Veterans Administration Hospital in Lincoln.

The primary purpose of the class project was to show the importance of classification and how to put it to use in writing. An indirect purpose related to written communication is to give the students a new outlook on their career choice.



David Lyons and Judy Overdorf examine current issues of the Telegram.

APPENDIX D

EXPERIMENTAL GROUP (E_1 and E_2) COMPARISONS

Project	Project 2 (26.914)**	Significant/ Nonsignificant	Project 3 (30.666)	Significant/ Nonsignificant	Project 4 (30.739)	Significant/ Nonsignificant
1 (24.428)	-0.85323	N	-3.3321	S*	-3.9404	S*
2			-2.4087	S*	-2.8419	S*
3					-051431	N

*Significant when $t \geq \pm 1.68$

**Project means are in parenthesis

APPENDIX D (Continued)

CONTROL GROUP (C₁ and C₂) COMPARISONS

Project	Project 2 (25.675)**	Significant/ Nonsignificant	Project 3 (27.805)	Significant/ Nonsignificant	Project 4 (27.657)	Significant/ Nonsignificant
1 (25.693)	-0.84663	N	-1.9091	S*	-1.9313	S*
2			-1.2067	N	-1.1915	N
3					.077352	N

*Significant when $t \geq +1.68$

**Project means are in parenthesis